

Amendments to the Specification

- 1) Please insert the following title at page 1, line 1:

Title of the Invention

- 2) Please insert the following section heading and text at page 1, line 5:

Cross-Reference to Related Applications

This application is a 371 of International PCT Application PCT/FR04/82851, filed November 5, 2004, the entire contents of which are incorporated herein by reference.

- 3) Please insert the following section heading at page 1, below the above-referenced paragraph:

Background of the Invention

- 4) Please insert the following section heading at page 3, line 16:

Brief Summary of the Invention

- 5) Please insert the following section heading and text at page 12, line 15:

Brief Description of the Several Views of the Drawings

For a further understanding of the nature and objects for the present invention, reference should be made to the following detailed description, taken in conjunction with the accompanying drawings, in which like elements are given the same or analogous reference numbers and wherein:

Figure 1 shows two images obtained by scanning electron microscopy with two different magnifications (figure 1a: $\times 8000$ and figure 1b: $\times 10000$).

Figure 2 shows maps of the constituent elements of the membrane, obtained by EDS analysis.

Figure 3 shows by X-ray diffraction the fact that the MgO (40 vol%)/ $\text{La}_{0.6}\text{Sr}_{0.4}\text{Fe}_{0.9}\text{Ga}_{0.1}\text{O}_{3-\delta}$ (60 vol%) blend does not result, after being calcined at 1200°C for a few hours in nitrogen, in any new compounds.

Figure 4 shows by X-ray diffraction that the BaTiO_3 (40 vol%)/ $\text{La}_{0.6}\text{Sr}_{0.4}\text{Fe}_{0.9}\text{Ga}_{0.1}\text{O}_{3-\delta}$ (60 vol%) blend does not result, after being calcined in nitrogen at 1200°C for a few hours, in any new compounds.

Figure 5 is a secondary-electron SEM micrograph of the composite containing no blocking agent (magnification: $\times 3000$; grain size between 2 and 10 μm).

Figure 6 is a secondary-electron SEM micrograph of the $\text{La}_{0.6}\text{Sr}_{0.4}\text{Fe}_{0.9}\text{Ga}_{0.1}\text{O}_{3-\delta}$ composite containing 5 vol% magnesium oxide as blocking agent (magnification: $\times 20000$; grain size between 0.1 and 1 μm).

Figure 7 is a secondary-electron SEM micrograph of the $\text{La}_{0.6}\text{Sr}_{0.4}\text{Fe}_{0.9}\text{Ga}_{0.1}\text{O}_{3-\delta}$ composite containing 5 vol% magnesium oxide as blocking agent (magnification: $\times 50000$; grain size between 0.2 and 1.6 μm).

Figure 8 is device used to carry out permeation measurements including a tube furnace and gas feeds and analyzers (gas chromatography - YSZ-based oxygen probe).

Figure 9 shows curves of the variation in oxygen flux as a function of temperature for each of the composites.

Figure 10 shows the impact of the membrane microstructure on the activation energy of the oxygen permeation flux, which energy decreases when the proportion of magnesium oxide increases.

- 6) Please delete the heading "**Experimental Part**" at page 12, line 16.
- 7) Please insert the following section heading at page 12, line 17:
Detailed Description of the Invention

- 8) Please insert the following paragraph at page 16, line 19:

It will be understood that many additional changes in the details, materials, steps and arrangement of parts, which have been herein described in order to explain the nature of the invention, may be made by those skilled in the art within the principle and scope of the invention as expressed in the appended claims. Thus, the present invention is not intended to be limited to the specific embodiments in the examples given above.

- 9) Please replace the section heading at page 17, line 1, with the following text:

CLAIMS What is claimed is: